

ALTITUDE COMPENSATING TRAILER BRAKE SYSTEM

ABSTRACT OF THE DISCLOSURE

The invented apparatus is designed for use with a tow vehicle and trailer combination. The apparatus comprises a controller, a vacuum supply sensor, and a sensor unit used to measure the barometric pressure and/or elevation of the current location of the tow vehicle/trailer combination. Using information from the sensor unit, the controller determines a vacuum pump activation level and/or deactivation level appropriate for the ambient pressure in which the apparatus is operating. By monitoring the signal supplied by the vacuum supply sensor and by operating a vacuum pump switch signal, the controller maintains a supply of vacuum between the activation and deactivation levels. In this manner, the controller can compensate for changes in local conditions so as to operate the vacuum pump in an efficient manner while maintaining an adequate supply of vacuum for operation of the trailer brake system.